Modular Arithmetic Proof of a Prime Number Solution to Infinity

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Abstract:

I’m very happy to present a new prime number solution that I have discovered with you all. I’ve discovered that our entire number system is completely reactionary and prime numbers are not random. And the proof was lying in how prime number 2 eliminates all even integers. This causes a reactionary effect where 3n removes all odd composites of 3 to infinity. Where N is 3,5,7,9, & 11. And you increase these 5 multiples of prime number 3 by 10 to infinity. This in turn causes prime number 5 to have a reactionary effect that forces the equation 5n. Where n equals 5 & 7. And you increase these 2 multiples by 6 to infinity simultaneously for prime number 5’s exact composites. This causes a reactionary effect that forces all prime numbers past 5 to end in a last digit of 1,3,7, or 9. Next to completely remove all of prime numbers 2,3, & 5’s composites from the number line you lay out the next 8 prime numbers of 7,11,13,17,19,23,29, & 31 out on paper and increase these 8 primes by the amount of 30 apiece to infinity. This naturally filters out all composites of 2,3, & 5 while catching all primes past 5. I have found that each prime number past 5 has 8 recursive prime multiples. One for each row and they are last digit locked to infinity. And each of these 8 prime multiples for all primes are increased by 30 to infinity with no calculating. The 1st of their 8 recursive multiples are always its square. So you multiply 7•7 =49. Which is the second number down in row 5. Just by this single first operation it uncovers 12 prime numbers of 7,11,13,17,19,23,29,31,37,41,43, & 47. Next you simply use the next higher prime in line to generate their next 7 recursive multiples of 7 as well as all other primes to infinity but it’s mandatory they must not overlap with their +30 increases. All 8 recursive prime multiples for all primes now obey modular arithmetic. Which causes all prime numbers composite removals from their eight recursive multiples, 1 for each row, to naturally fall as many spots down as their prime number is to infinity. I will include examples will be in the proof.

List of the first 20 Prime Numbers with their 8 Recursive Multiples listed by row

Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Row 7	Row 8
7×31	7×23	7×19	7×11	7×7	7×29	7×17	7×13
11×17	11×31	11×23	11×37	11×29	11×13	11×19	11×11
13×19	13×17	13×31	13×29	13×13	13×41	13×23	13×37
17×41	17×43	17×29	17×31	17×17	17×19	17×37	17×23
19×43	19×29	19×37	19×23	19×31	19×47	19×41	19×19
23×29	23×37	23×41	23×79	23×23	23×31	23×43	23×47
29×59.	29×79	29×47	29×43	29×41	29×37	29×31	29×29
31×37	31×41	31×43	31×47	31×79	31×53	31×59	31×31
37×61	37×53	37×79	37×41	37×37	37×59	37×47	37×43
41×47	41×61	41×53	41×67	41×59	41×43	41×79	41×41
43×79	43×47	43×61	43×59	43×43	43×71	43×53	43×67
47×71	47×73	47×59	47×61	47×47	47×79	47×67	47×53
53×59	53×67	53×71	53×79	53×53	53×61	53×73	53×107
59×83	59×79	59×107	59×73	59×71	59×67	59×61	59×59
61×67	61×71	61×73	61×107	61×79	61×83	61×89	61×61
67×151	67×83	67×79	67×71	67×67	67×89	67×107	67×73
71×107	71×151	71×83	71×97	71×89	71×73	71×79	71×71
73×79	73×107	73×151	73×89	73×73	73×101	73×83	73×97
79×103	79×89	79×97	79×83	79×151	79×107	79×101	79×79
83×89	83×97	83×101	83 to 109	83×83	83×151	83×103	83×107

Using these first 20 primes after 2,3, & 5 and their 8 recursive multiples listed above. All you need to do is increase these multiples by +30 to infinity for all of these 20 Primes to remove their exact composites or just find the sums of these multiples and just fall that many spots down using my eight row system listed above and it will recursively remove all composites with no calculations.

A Modular Arithmetic Proof of Primes Infinite Sequences to Infinity

Row-7	Row-11	Row-13	Row-17	Row-19	Row-23	Row-29	Row-31
7	11	13	17	19	23	29	31
37	41	43	47	7×7 = 49	53	59	61
67	71	73	7×11 =77	79	83	89	7×13 =91
97	101	103	107	109	113	7×17 = 119	11×11 = 121
127	131	7×19 = 133	137	139	11×13 = 143	149	151
157	7×23 = 161	163	167	13×13 = 169	173	179	181
11×17 = 187	191	193	197	199	7×29 = 203	11×19 = 209	211
7×31 = 217	13×17 = 221	223	227	229	233	239	241
13×19 = 247	251	11×23= 253	257	7×37 = 259	263	269	271
277	281	283	7×41 = 287	17×17 = 289	293	13×23 = 299	7×43 = 301
307	311	313	317	11×29 = 319	17×19 = 323	7×47 = 329	331
337	11×31 = 341	7×49 = 343	347	349	353	359	19×19 = 361
367	7×53 = 371	373	13×29 = 377	379	383	389	17×23 = 391
397	401	13×31 = 403	11×37 = 407	409	7×59 = 413	419	421
7×61 = 427	431	433	19×23 = 437	439	443	449	11×41 = 451
457	461	463	467	7×67 = 469	11×43 = 473	479	13×37 = 481
487	491	17×29 = 493	7×71 = 497	499	503	509	7×73 = 511
11×47 = 517	521	523	17×31 = 527	23×23 = 529	13×41 = 533	7×77 = 539	541
547	19×29 = 551	7×79 = 553	557	13×43 = 559	563	569	571
577	7×83 = 581	11×53 = 583	587	19×31 = 589	593	599	601

Modular Composite Removal's & Skip Equations With Explanations

You will notice that using Modular Arithmetic and this 8 row system that all 8 recursive multiples, 1 for each row, & for all primes starting with prime number 7 will increase their multiples by 30 to infinity simultaneously. And they will naturally fall however many spots the prime number is. Prime number 7's composite removals will fall 7 spots and increase the sum by 210 which is 7×30 = 7 spots down. 11s composite removals will fall 11 spots down and increase the sum by 330 which is 11×30 = 11 spots down. Etc for all primes recursive composite removal sequences for all 8 rows to infinity. To completely remove redundancy and to help with understanding prime numbers thoroughly I've developed 2 equations that provide all primes exact structured skip info so that they can be coded and remove redundant operations to help aid the search for primes with minimum computation. The 2 equations to remove all redundancy from all calculation is P1•P2=The spots down for P2 from their first overlapping composites due to shared multiples for removal. Example of this is the sum of 847 listed above in row 7 is 11's and 13's first skip of prime number 7's composite removals. And if you use this equation of P1•P2= The amount of spots down from first encountered skip/shared common multiplier of the smaller primes. It eliminates extra calculating that will aid in new prime number discoveries. Where P1= the smaller prime forcing P2 the larger primes skips due to shared multiples. P2 is the prime number you are needing the required skip info for the elimination of redundancy in calculating. If this is coded correctly you will bypass all redundancy to infinity. And you will find that using the modular arithmetic and 8 row system that it has locked in the composite removal process in such a way that 11's structured skips of 7s in each row happen every 7th removal for 7's. The same applies to all other higher primes composite removal sequences and their structured skips of smaller primes composite removal sequences to infinity. Like prime number 13's 3rd removal in row 2 is 13×77=1001 and it's skipped because 7×143 = 1001 clears this spot first. And just from the divisors in this overlap of multiples and use of the equations allows infinite prediction of skip patterns. 1001 is also 11×91 would be composite removal. So to find both of prime number 13s structured skips from 1001. We use the equation P1•P2 = Spots down. And we plug in each smaller prime that is forcing the skip to P1 times P2 and for 13s skips of 7s we get 91 spots down. 91 spots down at • 30/spot down = 2730 added to 1001 for 13's next structured skip using modular arithmetic. So when you encounter 3731 in row 2. It's already accounted for using this zero redundancy equation for all of the previous primes down to 7 as the smaller primes of 2,3,& 5 are filtered out and do not require skip computations. 13's structured skips of of 11's follows the same pattern from their first overlap/same composite removal. Every 7th removal by 13's will be skipped as well as every 11th removal for 13's for their structured skip of 11's and 7's. The same thing applies to all other primes and their structured skip info for passing smaller primes shared composites to infinity.

All of this above and below mentioned information is locked in all integers divisors and defines these interactions and patterns clearly deterministically.

The Skip Equations for all Prime Numbers past Smaller Primes Forced Structured Skips Using Modular Arithmetic

1. P1•P2= P2's Spots Down • 30= +Sum Increase for P2 from the first shared multiple of P1 in each row to infinity
2. P1•30= The +Multiple Increase to P2 from its first shared multiple with each Smaller Primes shared multiples in all eight rows to infinity.

This Proof is Dedicated to my son Bailey Earl Clem 12/13/16 we lost at birth. We loved you Bailey!

For any mathematical inquiries feel free to email me at BaileyEarlClem@gmail.com